

## Maine Policy Review

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Volume 10 | Issue 1

---

2001


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### Recommended Citation

Teisl, Mario F., Stephanie Peavey, and Kelly O'Brien. "Certification and Labeling of Forest Products: Will It Lead to More Environmentally Benign Forestry in Maine?" *Maine Policy Review* 10.1 (2001) : 72 -78, <https://digitalcommons.library.umaine.edu/mpr/vol10/iss1/9>.

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# Certification and Labeling of Forest Products:

*Will It Lead to More  
Environmentally Benign  
Forestry in Maine?*

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*From a supply and demand point of view, the trend toward forest-products certification appears simple: some retail consumers may prefer to buy products from forests managed in an environmentally sound way while some forest owners may be willing to alter their management practices in order to sell to these consumers. However, as the authors indicate, the issue of communicating to consumers the degree of “environmental good” being purchased can be complicated and may be a factor affecting the long-term success of certification programs. The authors present the results of a recent survey that assessed the use of two types of consumer labels—eco-seals and eco-labels. They conclude that the current practice in the forest-products industry of using eco-seals alone to market the “environmental goodness” of products may not be as effective as other types of labels that provide consumers with detailed information about the product’s environmental attributes. 🐉*

## INTRODUCTION

Spurred by organizations such as the Forest Stewardship Council (FSC) and the American Forest and Paper Association (AFPA), environmental certification and labeling programs for forests and forest products are rapidly being implemented. Forest certification is a process in which an independent third party measures current forest-management practices against some environmental-management standards. Forest-product certification requires an independent third party to perform a chain-of-custody audit to confirm that wood from certified forests is being used in product lines. Although certification of forest products is necessarily more complicated than that of certification of forests—particularly when forest products are composed of timber or wood pulp from many different forests—forest-product certification and labeling provide a direct link between forest-management practices and the environmentally conscious retail consumer.<sup>1</sup>

Recent research suggests there is a potential retail market for environmentally certified forest products (Ozanne and Vlosky, 1997; 1998). As a result, hundreds of companies in the United States have begun to sell a diverse range of certified forest products (FSC, 1998). In addition, large purchasers of wood (Home Depot, IKEA International) have committed to stocking environmentally certified wood products, presumably in the hope that retail consumers desire these types of products. This push to certify has already made an impact on Maine forestry. Currently, approximately 60% of the ten million acres of industrial forestland is certified by either FSC<sup>2</sup> or the AFPA through their Sustainable Forestry Initiative (SFI).

From a supply and demand point of view, the trend toward wood-products certification appears simple: some retail consumers prefer to buy products from forests managed in an environmentally acceptable fashion while some forest owners and managers are willing to alter their practices in order to sell to these consumers. From a market perspective, all that is needed is some mechanism to organize and match those who demand with those who provide improved forestry practices. Herein lies the concept of a labeling program.

Currently, sellers of certified wood products can designate that their product comes from an environmentally managed forest either through use of an eco-seal (see Figure 1) or an eco-label. Eco-seals, such as seals-of-approval issued by certification programs, provide a general stamp of confirmation that some standard has been met by the product itself or in its production process. They communicate little detail about the product's underlying attributes; only those who are intimately familiar with the certification agency and its standards understand the full meaning of the symbol. (The most popular example of an eco-seal may be the dolphin-friendly stamp found on certain brands of tuna.) On the other hand, eco-labels provide detailed information about the product's underlying attributes and are similar to a nutrition label.

Figure 1:  
Examples of Current Forestry Certification Labels



Despite the higher price associated with most environmentally certified wood products, the widespread implementation of eco-labeling programs suggests they are perceived as an effective method of altering consumer-purchasing behavior.

From a policy perspective, one aim of eco-labeling programs is to educate retail consumers about the environmental impacts of the product's consumption, thereby leading to a change in buying behavior and ultimately to the use of more environmentally benign forest-management practices. (For example, current certification programs focus on reducing water pollution, enhancing forest ecosystem health, species bio-diversity and the conservation of environmentally special forests such as old growth stands or those that contain endangered or threatened species.) From a business perspective, eco-labeling allows firms that use more sustainable forestry management practices to potentially gain market share and/or to maximize profits. Thus, information that allows retail consumers to make better purchase decisions is inherently desirable.

However, whether retail consumers of certified wood products demand specific changes in forest-management practices or just some general assurance of environmental improvement is not well understood. Some retail consumers may be largely ignorant of forestry practices and may merely want information about some undefined 'environmental improvement' in practices (as could be conveyed by an eco-seal). Other retail consumers may be very knowledgeable and desire information about certain, specific alterations. These consumers may prefer to see a more detailed label that discloses a table of environmental attributes, such as a nutrition label.

The financial costs of labeling can be divided into two areas: the cost of providing the information (i.e., the cost of designing and printing labels) and the cost of verifying the information (i.e., the cost of certification). Generally the cost of designing and printing wood product labels is relatively small. However, the costs of

forest and forest-product certification (the cost of the forest management and the chain-of-custody audits) may be significant, particularly for small landowners.<sup>3</sup> Certification also may increase costs by necessitating more costly forest-management techniques. Importantly, some proportion of these costs will be passed on to retail consumers in the form of higher prices.

Despite the higher price associated with most environmentally certified wood products, the widespread implementation of eco-labeling programs suggests they are perceived as an effective method of altering consumer-purchasing behavior. Indeed, research investigating other types of labeling programs (e.g., nutrition labeling) has demonstrated that they can make significant changes in consumer behavior (Teisl and Levy, 1997). However, an open question is whether certain types of labels have a greater effect on consumer behavior than other types of labels. For instance, the current trend in marketing environmentally certified wood products is to use simple eco-seals. What is potentially troublesome about this practice is that research in other product markets indicates that seals-of-approval (like an eco-seal) may be relatively ineffective (Teisl, et al., 1999). In short, there is little understanding of how the characteristics of a labeling program may affect a certification program's effectiveness.

Although many articles have presented 'production side' critiques of forest and forest-product certification (e.g., debate about the principles, criteria and indicators of sustainable forest management), in this article, we examine forest-product certification from the point of view of consumer research. We present some results from an ongoing University of Maine study focused on forest-product labeling. Results from this study indicate that the current state of forest-product labeling is not the most effective from a policy or business standpoint.

#### THE UNIVERSITY OF MAINE STUDY

Although there are potentially many different factors that could influence a label's effectiveness, two factors seem particularly important. One factor is the amount of information provided on the label. The second factor is the degree to which the labels are

mandatory. At one extreme, labeling restrictions are mandatory—certain pieces of information are required to be displayed on the product. At the other extreme, labeling restrictions are voluntary. Currently, most forest-product labeling programs fall into the voluntary category.

To understand how these factors might affect the retail consumers' propensity to buy environmentally certified wood products, during the summer of 2000, we conducted a mail survey of 3,290 United States' adults, of whom roughly 60% responded.<sup>4</sup>

The survey questionnaire featured two tasks designed to elicit respondent reactions to alternative labeling programs. The first task presented various environmental labels to respondents. After viewing each label, respondents were asked how they would: (1) rate the credibility of the label; (2) rate the environmental friendliness of the product; and (3) rate their level of satisfaction with the amount of information presented. It also asked respondents to indicate the likelihood that they would buy the product if the price and quality were the same as the brand of wood product they currently purchase. The amount of information presented on the label was varied. Some respondents viewed only an eco-seal while others viewed an eco-seal accompanied by a more detailed 'nutrition-type' label that listed five environmental attributes of the product (i.e., amount of environmental pollution, level of fish and wildlife protection, level of sustainable management) along with 'scores' for each attribute. The labels also differed by the organization certifying (hypothetically) the environmental information. The organizations included the United States Environmental Protection Agency (EPA), the Forest Stewardship Council (FSC) and the Sierra Club (SC).

In the second task respondents were simultaneously presented labels representing three competing (generic) wood products and, after viewing the products, respondents were asked which product they would buy. The price and environmental attributes were set so that one was the low-price, least environmentally sound product; one was the high-price, most environmentally sound product, and one was mid-range for both attributes. The price of the product was always disclosed;

however, the environmental information varied. We manipulated three key elements of the information. First, we manipulated the amount of environmental information displayed on a product; respondents were shown three levels: no environmental information, a simple eco-seal, or an eco-seal with more detailed environmental information. Second, we manipulated the degree to which the labels were displayed across the three products. Regimes could assume three levels: no environmental information disclosed, the two environmentally preferred products disclosed environmental information, or all three products disclosed environmental information. The situation where some products do not disclose environmental information (e.g., when none, or only two, of the three products disclose environmental information) might represent a policy scenario in which label disclosure is voluntary. The situation where all three products viewed by the respondent disclose environmental information might represent a mandatory labeling policy (i.e., all products must disclose environmental information). Finally, we manipulated the organization hypothetically certifying the environmental information (EPA, FSC, SC).

## RESULTS

### *Credibility*

As mentioned earlier, several factors can decrease the impact of a label, and could delay or derail the potential benefits of forest-certification programs. The credibility of the certifying organization is one such factor. Unlike other quality attributes that retail consumers can verify before purchase or shortly after purchase, the promise of improved forestry practices is impossible for most retail consumers to verify. Hence, the success of forest-product certification-labeling programs uniquely hinges on forest-product companies being able to credibly communicate to the consumer that forestry practices have been altered. To date, there is only limited evidence available concerning consumer acceptance and trust of forest-product certification.

In the present study, respondents generally viewed the (hypothetical) Sierra Club labels as the most credible and the (hypothetical) EPA labels as the least credi-

ble. In addition, respondents viewed more detailed environmental labels as more credible than simple eco-seals. For the EPA and Sierra Club labels, adding more detailed information increased the credibility rating by about 5%. However, adding more detailed information to the FSC label increased the label's credibility by about 15%. This may be due to the different degree to which individuals are familiar with the certifying agencies; adding more information to the FSC label may have been more powerful because most people are not familiar with the FSC.

#### *Correct Identification of Environmental Rankings*

Another potential measure of the effectiveness of a label is if retail consumers can accurately rank competing products by key attributes. When only eco-seals are provided, the Sierra Club-certified product was seen as environmentally better than either the FSC- or EPA-certified product; otherwise, eco-seals did not provide enough information for respondents to accurately differentiate products. However, adding a detailed information table allowed for greater, more accurate product differentiation; respondents were able to correctly use the environmental table to rank each product by its environmental profile.

Not surprisingly, when no environmental information is presented (i.e., only prices are given), most respondents chose the low-price product.... However, voluntary disclosure of more detailed labels did increase consumer choice of the most environmentally benign—albeit most expensive—product.

#### *Satisfaction with the Level of Information*

For environmental labeling to work, it must induce retail consumers to purchase environmentally friendly products over their non-environmentally friendly competitors. If faced with inadequate information, consumers may choose not to buy the presumably more

expensive, environmentally friendly product—thus destroying the potential benefits of the market. To gauge the potential for ‘turning off’ potential retail consumers, we asked respondents if they felt they had received enough information to make an informed decision. Label satisfaction seemed to reflect the label's perceived credibility. When viewing simple eco-seals, respondents were most satisfied with the level of information provided by the Sierra Club and least satisfied with the level of information provided by the FSC and EPA. This is interesting given that the actual amount of information on the eco-seals was the same across all the certifiers. However, for all three certifiers, respondents were most satisfied when presented with the more detailed labels.

#### *Likelihood-to-Buy*

In general, respondents' likelihood-to-buy responses were the same across certifiers when respondents were presented with only a simple eco-seal; respondents were only slightly more likely to buy a SC- or FSC-certified product relative to the EPA-certified product. Apparently, eco-seals did not provide enough information for respondents to accurately differentiate products. However, when additional information was provided,

respondents generally preferred to buy products that displayed higher environmental scores. For the more detailed labels, the likelihood-to-buy decision seems to reflect the joint effect of the label's perceived credibility and the perceived environmental rating. For example, except for the Sierra Club label,

the likelihood-to-buy score generally reflects the environmental ranking of the products. With the Sierra Club label, the likelihood-to-buy score is higher than the EPA product even though the EPA-labeled product actually displayed a higher environmental score; this reaction may reflect the relatively higher perceived credibility of the Sierra Club label.

### *Voluntary Versus Mandatory*

The amount of information provided on a label and the degree to which labels are mandatory can have a significant impact on a respondent's choice of products. Not surprisingly, when no environmental information is presented (i.e., only prices are given), most respondents chose the low-price product. With voluntary disclosure of eco-seals, either the eco-seal did not alter respondents' choices or they were slightly more likely to choose the product that was mid-range on price and the environmental attributes. Notably, the voluntary disclosure of eco-seals did not increase the choice of the highest-priced, but most environmentally sound product. However, voluntary disclosure of more detailed labels did increase consumer choice of the most environmentally benign—albeit most expensive—product. Thus, under a voluntary labeling program, more detailed disclosures assisted respondents significantly better than simple eco-seals; the eco-seal format simply did not allow identification of the most environmentally benign product. However, when detailed environmental information is disclosed, respondent choices are not significantly different across voluntary and mandatory labeling regimes. Apparently, respondents are able to correctly infer that the lack of a detailed environmental label on the low-price, least-environmentally sound product (under the voluntary scenario) signals that this product performs relatively poorly on this characteristic. Thus, when detailed environmental information is truthfully disclosed, voluntary labeling regimes work as well as similar mandatory labeling policies.

### DISCUSSION

The results suggest that United States' retail consumers do value the environmental benefits created from more environmentally benign forest-management practices. Thus, consumer-driven purchases could potentially support a future of environmentally benign forest-management practices in Maine with less reliance upon other policy alternatives coming from the Maine legislature or from the passage of forest-related referenda. However, the results also suggest that the current

state of forest-product labeling, which relies heavily on the use of simple eco-seals that may reflect different or similar standards, is not the most effective labeling approach.

Moreover, not only are detailed environmental labels more beneficial for retail consumers (and environmentally sensitive forest-product manufacturers) than simple eco-seals, they also may help to reduce the use of misleading environmental claims. The use of misleading environmental claims is not trivial. One study found that approximately 50% of environmental advertising was misleading or deceptive (Kangun, et al., 1991). Further, a study of "sustainability" claims applied to wood products by over six hundred companies revealed that only three were willing to substantiate their environmental marketing claims (Read, 1991). Thus, more detailed environmental labels, unlike eco-seals, may help to restrict the seller's ability to make these misleading and false environmental claims, and may help to improve the credibility of sellers making honest claims.

The eco-labeling of environmentally certified forest products has the long-range potential of encouraging more environmentally benign forest practices in Maine and may financially reward more environmentally sensitive firms in the state. However, it seems unlikely that the current practice of using eco-seals will increase purchases of products from Maine's environmentally managed forests. We recommend that parties interested in the long-range success of these programs (e.g., Maine-based environmental organizations, forest-products manufacturers and environmental certifiers) consider altering current labeling approaches. Specifically, we recommend that eco-seals should not



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be used by themselves; at a minimum, supporting text is needed to increase credibility. We also recommend that environmental certification of wood products should be performed, or regulated, by one familiar governmental or independent organization. If one familiar governmental or independent organization is not used, we recommend the implementation of a significant public-education program to inform consumers about certifying organizations and their certification processes. 

3. Evidence suggests there are many small landowners in Maine who would certify their forests if the cost of the certification was lower. FSC-based organizations like SmartWood have attempted to aggregate smaller groups of landowners to help lower the individual costs of certification.
4. Individuals wanting more information about the wood labeling study can contact Mario F. Teisl, Department of Resource Economics and Policy, 5782 Winslow Hall, University of Maine, Orono, ME 04469. Phone: 207-581-3162; e-mail: teisl@maine.edu

#### REFERENCES

- Forest Stewardship Council. "Reaching the Critical Mass." *FSC U.S. Initiative Update*. 2.2 (1998).
- Kangun, N., L. Carlson and S.J. Grove. "Environmental Advertising Claims: A Preliminary Investigation." *Journal of Public Policy and Marketing*. 10.2 (1991): 45-58.
- Ozanne, L.K. and R.P. Vlosky. "Willingness to Pay for Environmentally Certified Wood Products: A Consumer Perspective." *Forest Products Journal*. 47.6 (1997): 39-48.
- Ozanne, L.K. and R.P. Vlosky. "Environmental Certification of Wood Products." *Women in Natural Resources*. 19.3 (1998): 4-48.
- Read, M. *An Assessment of Claims of Sustainability Applied to Tropical Wood Products and Timber Retailed in the United Kingdom July 1990-January 1991*. London: World Wide Fund for Nature, 1991.
- Teisl, M.F., and A.S. Levy. "Does Nutrition Labeling Lead to Healthier Eating?" *Journal of Food Distribution Research*. 28.3 (1997): 18-27.
- Teisl, M.F., B. Roe and A.S. Levy. "Eco-Certification: Why It May Not Be A 'Field Of Dreams.'" *American Journal of Agricultural Economics*. 81.4:(1999). Forthcoming.

#### ENDNOTES

1. Here we define retail consumers as those who purchase end-use products. Thus, an individual who purchases a piece of wooden furniture or some lumber for a do-it-yourself project is a retail consumer. A contractor who purchases dimensional lumber to construct a house is not a retail consumer.
2. FSC is not a certification agency but an accreditor of certification agencies; each FSC-approved certifier must adhere to FSC's principles and criteria.